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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,176	01/31/2002	Erkki Heinonen	2532-00277	9376
26753	7590	05/19/2004		
ANDRUS, SCEALES, STARKE & SAWALL, LLP 100 EAST WISCONSIN AVENUE, SUITE 1100 MILWAUKEE, WI 53202			EXAMINER LEWIS, AARON J	
			ART UNIT 3743	PAPER NUMBER

DATE MAILED: 05/19/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/062,176

Applicant(s)

HEINONEN, ERKKI

Examiner

AARON J. LEWIS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02/09/2004 (AMENDMENT).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 21 is/are rejected.
- 7) ☒ Claim(s) 7 and 9-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,5,8,21 are rejected under 35 U.S.C. 102(b) as being anticipated by Jeffries et al.('050).

As to claim 1, Jeffries et al. disclose liquid reservoir means (30) for supplying liquid to a nebulizer for atomization, said liquid reservoir comprising: a liquid reservoir (30) formed of first (32) and second (34) membranes positioned in a generally opposing relationship to form a closed chamber between the membranes for containing liquid, said first and second membranes being formed of a resilient material (col.5, line 8), said first and second membranes having opposing surfaces (fig.3) which are contiguous when the chamber is empty (e.g. upon being fully compressed by drive plate 42 and pad 46) and spaced when said chamber is filled with liquid and thereby expanded, the expansion of the chamber distending said resilient material membranes to cause said resilient material membranes to apply pressure to liquid in the chamber; flow control means (36 and col.5, lines 39-40) in communication with the chamber (fig.3) for controlling the discharge of liquid from the reservoir to the nebulizer (col.6, lines 30-34) under the pressure applied to the liquid by the distended resilient material membranes; and a member (46) in the nebulizer having a surface (i.e. the surface of member 46

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abutting membrane 32 in fig.3) on which one of said first and second membranes is contiguous, said surface of said member being formed to deform at least one of said first and second membranes as a result of the contiguity of the membrane on the member to further increase the pressure (col.5, lines 24-26) on the liquid in said chamber.

With respect to the first and second membranes of reservoir (30) applying pressure to the liquid therein, it is submitted that inasmuch as the membranes are expressly disclosed as being flexible and compressible, they would inherently exert a force at least equal but opposite to that exerted by the liquid medicament therein.

As to claim 2, Jeffries et al. disclose the surface of said member (46) being formed to cause said membranes to progressively contact each other (col.5, lines 24-26), commencing at a periphery of the membranes and extending toward a center of the membranes. The reservoir (30) of Jeffries et al. is illustrated as being wider at its center than at its periphery; consequently, upon compression of the reservoir opposing peripheral portions will contact each other before opposing central portions given the shape of the member (46) as illustrated in fig.3.

As to claim 5, the flow control means (#36 of fig.3) of Jeffries et al. is illustrated as being mounted in one of said first and second membranes.

As to claim 8, Jeffries et al. disclose means (40,42) for retaining the reservoir on the nebulizer.

As to claim 21, the reservoir (30) of Jeffries et al. is disclosed as being a liquid reservoir (e.g. col.5, line 40). Given its liquid impermeable structure (col.5, line 8), it is fully capable of performing the recited function of being a liquid drug reservoir.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3,4,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeffries et al. in view of Dean ('093).

As to claim 3, Jeffries et al. (fig.8) illustrates the surface of member (46) as being formed so that a radius of curvature of said surface increases from a periphery of said surface to a center of said surface. To the extent, if any, that the radius of curvature of the surface of member (46) may not increase from periphery to center, resort is had to Dean which teaches a member (F2) which has a surface which contacts a resilient reservoir (B), the surface having a radius of curvature that increases from periphery to center.

It would have been obvious to modify the shape of the surface member (46) of Jeffries et al. to have an increasing radius of curvature from periphery to center as mere substitution of one well known member for another as taught by Dean.

As to claims 4 and 6, Dean (fig.5) illustrates that the surface of the member (F2) is formed to concavely deform at least one of said first and second membranes (B) when viewed from the exterior of the chamber.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 there is an inconsistency between the language in the preamble and certain portion(s) in the body of the claim, thereby making the scope of the claim unclear. Applicant is required to clarify what the claim is intended to be drawn to, i.e. either the liquid reservoir means or the combination of a liquid reservoir means and a nebulizer. Applicant is also required to make the language of the claim consistent with his intent.

***Allowable Subject Matter***

7. Claims 7,9-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

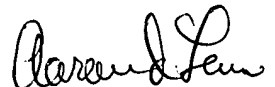
8. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON J. LEWIS whose telephone number is (703) 308-0716. The examiner can normally be reached on 9:30AM-6:00PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, HENRY A. BENNETT can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
AARON J. LEWIS  
Primary Examiner  
Art Unit 3743

Aaron J. Lewis  
May 15, 2004